

Pre-Calculus Chapter 3 Review

Graph the function $y = \frac{1}{3}^x$

Graph the function $f(x) = 4^x - 2$

Solve for x:

$$\log_2 32 = x \qquad 7^{\log_7 3} \qquad \log_x 8 = \frac{3}{2}$$

$$\ln x = 5.4$$

$$\log(x+2) + \log x = 3 \log 2$$

$$\log_3(b^2 - 2) + \log_3 2 = 2$$

$$3 \ln 4x = 5$$

$$3^{x+4} = 4^x$$

$$8^{\frac{x}{2}} = 4^{x+1}$$

$$\log_6 1 = x$$

$$\log_5 \sqrt[3]{25}$$

$$\log(x+2) + \log(x-1) = 4$$

$$\log_4 64 = x$$

$$\ln e^x = 8$$

$$2 \log(x-3) - 3 \log(x+4) = 1$$

Explain by transformations how to change the graph of

$$\log_2 x \text{ to } \log_2(x+4) + 3$$

Solve $\frac{3^x - 3^{-x}}{2} = 5$

A casserole is removed from a 375°F oven, and it cools to 200°F after 15 minutes in a 75°F room. How long (from the time it is taken out of the oven) does it take to cool to 100°F ? (Use Newton's Law of cooling)

Juan contributes \$65 monthly into an IRA annuity for 20 years. If the account earns 5.6% annual interest compounded monthly, what is the value of Juan's account after 20 years.

A \$125,000 mortgage requires monthly payments for 30 years at 7.5% APR. How much is each payment.

What other natural log equations are equivalent to $y = 4x^3$?

How long will it take an investment of \$750 at 8.75% APR compounded quarterly to grow to \$1000.

Find the amount accumulated after investing \$300 for 5 years at the interest rate of 3.5% compounded continuously.

You have \$600 to invest. What annual interest rate compounded quarterly is required to have \$1200 in the account in 8 years?

Determine how much time is required for an investment to triple if a value of interest is earned at the rate of 6.25% compounded quarterly.

